

525,973

10/525973

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



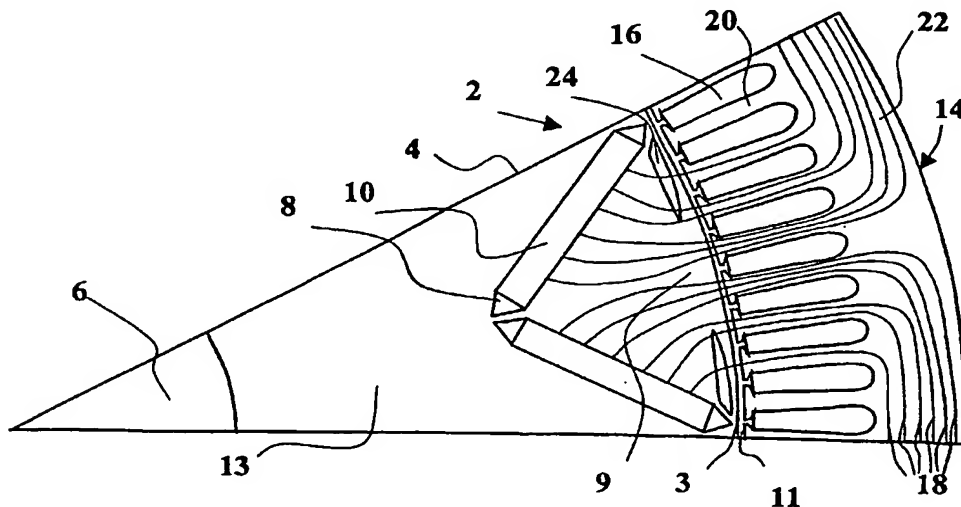
(43) International Publication Date  
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number  
**WO 2004/019467 A1**

- (51) International Patent Classification<sup>7</sup>: **H02K 1/27**
- (21) International Application Number: **PCT/FI2003/000621**
- (22) International Filing Date: 26 August 2003 (26.08.2003)
- (25) Filing Language: Finnish
- (26) Publication Language: English
- (30) Priority Data:  
20021524 26 August 2002 (26.08.2002) FI
- (71) Applicant (for all designated States except US): **ABB OY**  
[FI/FI]; Strömbergintie 1, FIN-00380 Helsinki (FI).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **KOLEHMAINEN, Jere** [FI/FI]; Mörskynkatu 1, FIN-66510 Merikaarto (FI). **PEKOLA, Jari** [FI/FI]; Haventie 23-25-B 14, FIN-65200 Vaasa (FI). **IKÄHEIMO, Jouni** [FI/FI]; Tassintie 8, FIN-61300 Kurikka (FI).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A ROTOR FOR A PERMANENT-MAGNET ELECTRICAL MACHINE AND A METHOD FOR MANUFACTURING IT



(57) Abstract: The object of the invention is a rotor (4) for a permanent-magnet electrical machine, comprising an axle (6) mounted to the machine body with bearings, a rotor pack made of iron and arranged around the axle (6), as well as permanent magnets (10) adapted to the rotor pack, used for forming the magnetic poles (9) of the rotor. According to the invention, the rotor poles (9) contain a slot (24) extending from both edges of the pole (9) essentially towards the centre of the pole; the slot (24) is closer to the outer circumference (3) of the rotor than the central axle of the rotor. The invention also includes a method for manufacturing such a rotor.

WO 2004/019467 A1